WHAT IS CLAIMED IS:

1. A process for loading a centrifuge rotor with overburden onto a contained rock core sample comprising the steps of:

providing a containment cylinder closed at one end;

providing a rubber liner closing one end of the containment cylinder around the inlet/outlet covering the sides of the containment cylinder;

placing core sample interior of the liner and containment cylinder for compression by the rubber liner;

providing a loading ring for compressing the rubber liner within the containment cylinder over the placed core sample; and,

compressing the loading ring so that the rubber liner essentially reacts as a fluid to apply overburden pressure to the core sample.

2. The process for loading a centrifuge rotor with overburden onto a contained rock core sample according to claim 1 and including the further steps of:

providing a locking mechanism connected between the loading ring and the containment cylinder for maintaining the loading ring compression on the rubber liner; and,

locking the locking mechanism after the compressing step to statically maintained the overburden pressure on the core sample.

3. The process for loading a centrifuge rotor with overburden onto a contained rock core sample according to claim 1 and wherein the passing fluid through the core samples step includes:

placing the containment cylinder in a centrifuge.

4. The process for loading a centrifuge rotor with overburden onto a contained rock core sample according to claim 1 and wherein the passing fluid through the core samples step includes:

passing fluid from one inlet/outlet to the other inlet/outlet through core sample.

5. A chamber for containing a core sample with overburden pressure comprising:

a containment cylinder closed at one end;

a fluid inlet/outlet through the closed end of the containment cylinder;

a rubber liner closing one end of the containment cylinder around the inlet/outlet covering the sides of the containment cylinder;

a core sample interior of the liner and containment cylinder for compression by the rubber liner;

a loading ring for compressing the rubber liner within the containment cylinder over the placed core sample,

a fluid inlet/outlet through the loading ring;

means compressing the loading ring so that the rubber liner essentially reacts as a fluid to apply lithostatic pressure to the core sample.

6. A process for testing fluid flow within a core sample taken from within the Earth at an elevation below ground having lithostatic pressure due to overburden comprising the steps of:

applying the lithostatic pressure due to overburden independent of the overburden to the core sample; and,

after applying the lithostatic pressure to the core sample, flowing fluid through the core sample to determine the fluid flow or capillary properties of the core sample.

7. A process for loading a cell contained rock core sample with overburden comprising the steps of:

providing a containment cylinder closed at one end;

providing a fluid inlet/outlet through the closed end of the containment cylinder;

providing a rubber liner closing one end of the containment cylinder around the inlet/outlet covering the sides of the containment cylinder;

placing core sample interior of the liner and containment cylinder for compression by the rubber liner;

providing a loading ring for compressing the rubber liner within the containment cylinder over the placed core sample,

providing a fluid inlet/outlet through the loading ring;

compressing the loading ring in an hydraulic press so that the rubber liner essentially reacts as a fluid to apply lithostatic pressure to the core sample; and,

passing fluid through the core sample to determine fluid flow characteristics of the sample at the lithostatic pressure.

8. The process for loading a centrifuge rotor with overburden onto a contained rock core sample according to claim 7 comprising the steps of:

before the compressing step, heating the containment cylinder, rubber liner, and core sample to a temperature ambient to the rock core sample with overburden within its natural environment.